THE EFFECTIVENESS OF VACCINE OF OUTER MEMBRANE PROTEIN 52 kDa IN PREVENTING DAMAGE OF GILLS OF NILE TILAPIA FISH (*Oreochromis niloticus*) THAT INFECTED BY *Aeromonas hydrophila*

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ABSTRACT

The aim in this study was to know effect of the vaccine of *Outer Membrane Protein* 52 kDa in preventing damage of nile tilapia's gills that was infected by *Aeromonas hydrophila* bacteria. Twenty of nile tilapia with average weight of 40 gram and approximately length of 10-12 cm were randomly devided into four group of treatment (P0(-), P0(+), P1 and P2) and five repetition. P0(-) (control, not vaccinated and not infected), P0(+) (not vaccinated and then infected by *Aeromonas hydrophila*)., P1 (nile tilapia was vaccinated whole cell protein "Hydrovac®" and then infected by *Aeromonas hydrophila*), P2 (nile tilapia was vaccinated *Outer Membrane Protein* 52 kDa and then infected by *Aeromonas hydrophila*). Histopathologic observed was lamella part which found lamellar oedema, lamellar hyperplasia, lamellar fusion and necrosis were analyzed by *Kruskal Wallis* test indicates that there are significant differences ($p<0.05$) among treatment, the further test result by using *Man-Whitney*. The results of the study showed level of damage in the P2 lower than those P0(+) and P1. This proved that P2 effective can reduce damage in gills of nile tilapia.

Keyword : *Aeromonas hydrophila*, nile tilapia, *Outer Membrane Protein* 52 kDa, *histophatologic of gills*